

WHAT IS CLAIMED IS:

Sub B1  
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1. A deformable mirror comprising:  
a vertical comb drive, and  
a reflective surface attached to said vertical comb drive.

Sub A1  
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2. The deformable mirror according to claim 1, further comprising  
a spring for biasing said vertical comb drive to maintain said reflective surface  
in an original position absent application of a voltage to said vertical comb  
drive.

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3. The deformable mirror according to claim 1, wherein said vertical  
comb drive comprises a first array of stationary elements and a second array of  
moving elements correspondingly interspersed with said first array, said  
reflective surface being attached to said second array.

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4. The deformable mirror according to claim 3, further comprising  
a layer covering tops of elements of said second array.

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5. The deformable mirror according to claim 4, a spring for  
suspending said first array relative to said second array, said spring being  
attached to said layer.

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6. The deformable mirror according to claim 3, wherein said  
stationary elements and said movable elements are circular.

1           7.     The deformable mirror according to claim 3, wherein said  
2     stationary elements and said movable elements are planar.

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1           8.     The deformable mirror according to claim 4, wherein said layer  
2     is attached directly to said reflective surface.

1           9.     The deformable mirror according to claim 4, further comprising  
2     a post attaching said layer to said reflective surface.

1           <sup>11</sup>  
~~10.~~     The deformable mirror according to claim <sup>10</sup>~~9~~, wherein said post  
2     is in a center of said reflective surface.

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1           11.    The deformable mirror according to claim 3, wherein voltage is  
2     applied to each stationary element of said first array individually or each moving  
3     element of said second array individually.

1           12.    The deformable mirror according to claim 3, wherein said vertical  
2     comb drive comprises an array of vertical comb actuators.

1           13.    The deformable mirror according to claim 12, <sup>further comprising</sup>  
2     individually providing voltage to each actuator of said array. <sub>means for</sub>

1           14.    The deformable mirror according to claim 12, further comprising  
2     springs for individually suspending each of said second array of each actuator  
3     in said array.

1           <sup>13</sup>  
~~15.~~     The deformable mirror according to claim <sup>12</sup>~~14~~, further comprising  
2     an anchor for supporting said springs.

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1                    <sup>8</sup>  
                  ~~17.~~    The deformable mirror according to claim ~~16~~<sup>7</sup>, further comprising  
2    a top layer between the teeth and the reflective surface.

1                    <sup>9</sup>  
                  ~~18.~~    The deformable mirror according to claim ~~16~~,<sup>7</sup> further comprising  
2    a conductor for individually connecting each tooth of said teeth to a voltage  
3    source.

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1 19. A method of deforming a mirror comprising:  
2 attaching the mirror to a vertical comb actuator; and  
3 applying a voltage to the vertical comb actuator.

1            20.    The method according to claim 19, wherein said vertical comb  
2 drive comprises an array of vertical comb actuators and said applying  
3 individually applies voltage to said vertical comb actuators.